



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,258	09/09/2003	Soon Hak Kim	YHK-0118	4027

34610 7590 12/07/2004

FLESHNER & KIM, LLP  
P.O. BOX 221200  
CHANTILLY, VA 20153

EXAMINER

LORENZO, JERRY A

ART UNIT PAPER NUMBER

1734

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/657,258

Applicant(s)

KIM, SOON HAK

Examiner

Jerry A. Lorengo

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/01/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

(1)

***Specification***

A substitute specification including the claims is required pursuant to 37 CFR 1.125(a) because of the presence of numerous, grammatical, syntactic and typographical errors throughout. Examples of such inconsistencies and errors are as follows:

The specification at page 7, paragraph [0030] and Table I set forth the composition of the photo-DFR 22 and disclose that "it has a strong adhesive strength with the substrate 21, and if it is exposed to light in the following exposure process, it becomes stiff by the cross linkage of the reactive monomer to lose its adhesive strength." The specification at pages 9 and 10, paragraph [0035], however, discloses that it is the unexposed portions of the photo-DFR (in the non-electrode area) which lose their adhesive strength by cross linking while the exposed portions (in the electrode pattern area) retain their high adhesive strength. There also appears to be an inconsistency in the element numbers used the specification as compared to those utilized in Figures 2C and 3C. The Applicant should note that these are only a few of the inconsistencies with the disclosure as originally filed and the Applicant is strongly urged by the Examiner to correct these and any other such inconsistencies in the substitute specification.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

(2)

***Drawings***

The drawings are objected to because they contain numerous inconsistencies regarding description and element labeling as compared to the specification. For example:

The specification at page 7, paragraph [0029] discloses that the photo-DFR22 is formed on the entire surface of a substrate 21. Figures 1A and 3A, however, show the photo-DFR 22 as covering less than the entire surface of the substrate 21;

The specification at pages 9 and 10, paragraph [0035] disclose that the mask 23 includes a light shielding part 23A corresponding to an electrode pattern to be formed and a light transmitting part 24B corresponding to the area other than the electrode pattern to be formed. Figures 2B and 3B, however, show the light shielding part labeled as 22b (Figure 2B) and 23b (Figure 3B);

Paragraph [0035] goes on to disclose that the non-exposure area "22A" of the photo-DFE becomes stiff by cross linkage of the reactive monomer, thereby losing the adhesive strength with the substrate. However, the exposure area "22B" still keeps high adhesive strength by the reactive monomer, thereby having high adhesive strength with the substrate 21. Figures 2B and 3B, however, illustrate the exposure area as 22A and the unexposed area as 22B.

The drawings are further objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Claim 1, lines 7-8 disclose that an electrode material layer is formed on the exposed photo material layer. Figures 2C and 3C, however, show the electrode material layer 24 as being formed over both the exposed and unexposed regions of the photo material layer. Therefore, the partial formation of the electrode layer on only the exposed regions of the photo material layer must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. The Applicant should note that these are but a few of the inconsistencies between the drawings, written description and claims.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

Art Unit: 1734

must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

(3)

***Claim Objections***

Claims 1-12 are objected to because of the following informalities: Claim 1, line 4, the word "decreases" should most-correctly read "decreasing." Claim 1, line 6, the word "desire" should most-correctly read "desired." Claim 1, lines 7-10, are idiomatic in nature and require recasting. Similar instances of obtuse language occur in claims 2 and 3. Appropriate correction is required.

(4)

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

In addition, claim 1, lines 7-8 disclose that an electrode material layer is formed on the exposed photo material layer. Figures 2C and 3C, however, show the electrode material layer 24 as being formed over both the exposed and unexposed regions of the photo material layer. It is not understood by the Examiner whether the applicant is attempting to claim only partial

Art Unit: 1734

electrode layer formation on the exposed regions of the photo material layer or whether the electrode material layer is in fact formed over the entire surface, i.e., both exposed and unexposed regions, of the photo material layer

Claim 2 recites the limitation "the exposure area of the electrode material layer" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 is also indefinite because it is not understood by the Examiner what exactly is being claimed. It appears that the Applicant is attempting to claim that firing occurs on only those areas of the electrode material which remain on the unexposed portions of the photo material after peeling of the electrode material from the exposed portions of the photo material layer.

(5)

***Allowable Subject Matter***

Claim 1 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

Methods for the formation of an electrode array for a plasma display panel using a photo peeling method, such as taught by Japanese Patents 08-167373; 08-273535; 09-92141 and JP 09-147751 to Akimoto et al., are known in the art. Akimoto et al., for example, disclose a process comprising the steps of: Providing a electrode formation film comprising, in order, a support (peeling) layer 51, an adhesive or tie layer 52, a dry film paste (electrode material) layer 53; and a photosensitive adhesive layer 54 whose adhesion falls when exposed to UV radiation; laminating the electrode formation film to plasma display substrate 61; providing the photosensitive adhesive layer 54 with an electrode pattern by pattern-wise exposure through a mask 62 whereby the layer 54 loses adhesion to the substrate in those areas exposed to UV radiation via mask 62; peeling the layers 51, 52, 53 and the exposed areas of 54 from the substrate 61 thereby leaving behind only regions of layer 53 corresponding to unexposed regions of the photosensitive adhesive layer 54 on the substrate 61; and baking the substrate 61 and

Art Unit: 1734

regional corresponding layers 53 and 54 to form a sintered electrode pattern 63 on substrate 61. None of the prior art of record, however, specifically teach or suggest the method set forth in applicant claim 1, wherein the electrode array is formed in a step-wise photo-peeling method wherein the photo curable layer is formed first on the substrate followed by patterning of the photo curable layer, formation of the electrode material layer thereon; formation of a peeling layer on the electrode material layer followed by the peeling of the peeling and non-adhered electrode material layers and firing of the remaining electrode material and photo curable layers on the substrate to form the electrode array.

(6)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (571) 272-1233. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J.A. Lorengo, Primary Examiner

AU 1734

December 3, 2004